Help & Manual

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1 Introduction

Thank you for choosing Realizzer 3D.

Realizzer 3D allows you to create photo realistic designs and instantly view your light show in real-time on your PC. The software has a comprehensive library with many 3D models included such as Truss, Decorations and Stages etc.. With the Pro, Ultimate and Studio versions you have also the possibility to simulate complete laser and video installations (Lasergraph DSP & Pangolin Support). Also, custom created 3D models can be imported in over 20 formats (OBJ, 3DS, DAE, etc.).

The simulation can be controlled with any DMX capable lighting control protocol such as ArtNET and SyncroNET or directly by a separate available USB-DMX Interface.

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1.1 System Requirements

Minimum system requirements:

- 2GHz Dual-Core CPU
- 1 GB RAM
- DirectX 9 compatible graphic card with 512MB RAM
- 1280 x 768 screen resolution
- Free USB-Port for License Dongle
- Windows XP / Vista / 7 / 8

Recommended system:

The most important component for Realizzer is always the CPU and graphic card. Realizzer works fine on most known gaming systems. We find the best quality is achieved by using NVIDIA cards.

Optimal Specification:

- Intel i7 CPU 3.5 GHz
- 8 GB RAM
- Gaming Level Graphics f.e. NVIDIA GTX680 or higher
- 1920x1080 screen resolution
- Windows 7 / 8

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1.2 Realizzer License KEY

The Realizzer License Key is a USB dongle. This Dongle needs to be connected to the computer during while running Realizzer to activate the Full Version. You will receive your personal Dongle when purchasing Realizzer.

The Realizzer USB-Dongle is available as:
- Realizzer Basic
- Realizzer Professional
- Realizzer Ultimate
- Realizzer Studio

The USB Dongle is used for software protection. Thank your for understanding.
Please contact your Realizzer Dealer/supplier if you would like to purchase an upgrade for your Realizzer License.

Demo Version

If no Realizzer USB-Dongle is connected the software will run in Demo mode.
Which features are limited in Demo Mode?
- You cannot save a project
- The software will stop working after 30-Min. Realizzer needs to be restarted.

Important Information

- **The Realizzer USB-Dongle is the most important item when you buy Realizzer. Do not lose it!**
- **The Realizzer USB-Dongle is not bound to one computer and can be used with each of your computers individually.**
- **Please always connect the USB-Dongle before starting Realizzer.**
- **Do not disconnect the USB-Dongle while running the software.**

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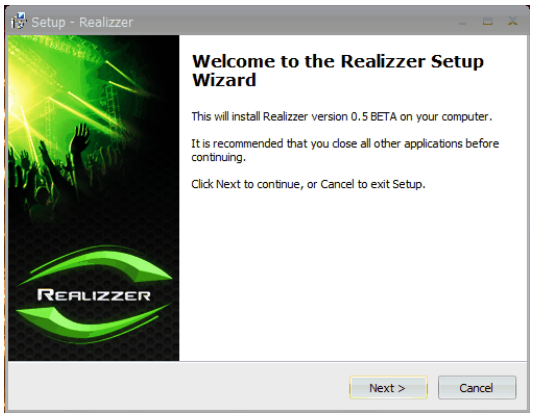
2 Getting Started

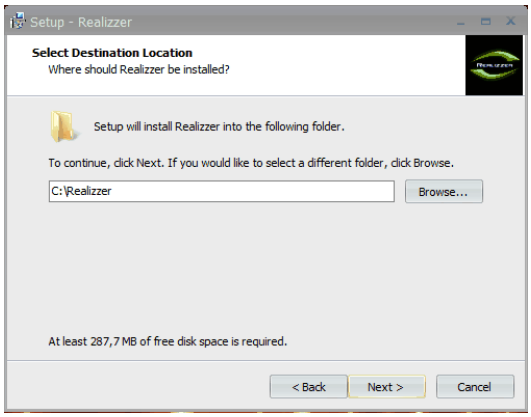
2.1 Installation Process

It is strongly recommend to use always the latest version available from our website. Just visit www.Realizzer.com to download the latest setup file. When using a Realizzer CD-ROM for installation, please insert the CD into your CD-ROM drive and the Setup will startup automaticly. If the Auto Installer does not launch, please navigate to the CD using the Windows Explorer and run the RealizzerSetup.exe manually.

Please make sure to:
1. Log into Windows as administrator and accept windows UAC if this message displays
2. Wait until the setup has been installed successfully. This can take some minutes depending on your computer speed.
3. Make sure DirectX 9 is installed on your PC. You can check this by run Start>Run> "dxdiag".


Setup - Realizzer
Welcome to the Realizzer Setup Wizard
This will install Realizzer version 0.5 BETA on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
REALIZZER
Next >
Cancel

Step 1
- You can always quit the Setup by choosing Cancel.
- Click Back in order to return to a previous screen.
- Now, please click Next to start installation


Setup - Realizzer
Select Destination Location
Where should Realizzer be installed?
Setup will install Realizzer into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\Realizzer
Browse...
At least 287,7 MB of free disk space is required.
< Back
Next >
Cancel

Step 2
- Choose an installation directory where the software will be installed.
- Browse - Click to change the folder

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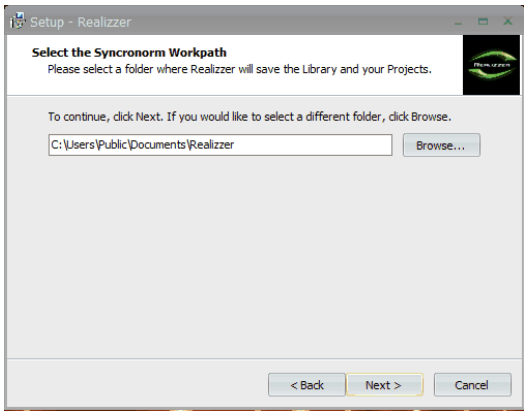

Setup - Realizzer
Select the Syncronorm Workpath
Please select a folder where Realizzer will save the Library and your Projects.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\Users\Public\Documents\Realizzer
Browse...
< Back
Next >
Cancel

Step 3

- Define the directory where the Setup will install all Library files.
- This path is used later to save all future projects and settings
- Make sure to have enough disk space future projects

Follow the next three steps by instructions and wait until Setup is finished completely.

2.2 Projects and Library

In the installation process the setup will ask for the Realizzer Work-Path. By default Realizzer will use your Documents folder to create a folder called "Realizzer".

This is the Place where Realizzer will save all future projects and library data. Your Realizzer folder contains following directories:

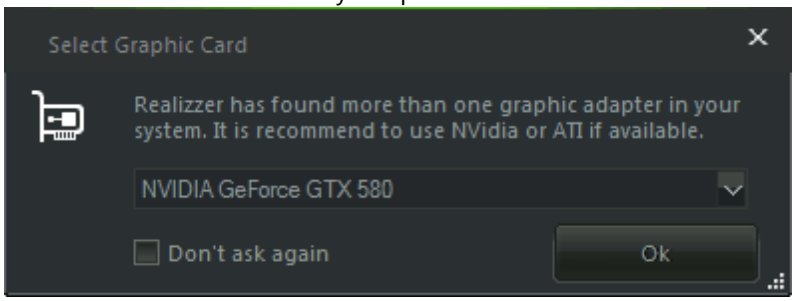
MyLibrarys - Contains all Library Fixtures, Models and Materials
MyProjects - Contains all your Project files

All files will be copied!

One important feature of Realizzer is that it will copy all files you are using in your project like, materials, fixtures, models or videos, in your Project folder. This makes it easy to exchange projects on different PCs. Simply copy or ZIP the current project folder and you will have everything in there. So you don't have to take care about shipping fixture files or models together with the project.

2.3 Multiple Graphic Adapters

Most laptops have more than one graphic card installed to save the battery. Most common are Intel HD Onboard graphics. Realizzer supports them, too but with lesser performance. During first startup, Realizzer will check how many adapters are installed and will ask which one it should take.


Select Graphic Card
Realizzer has found more than one graphic adapter in your system. It is recommend to use NVidia or ATI if available.
NVIDIA GeForce GTX 580
Don't ask again
Ok

Always use NVIDIA or ATI if available. If you have an NVIDIA card installed you can also use the NVIDIA System configuration to define the default graphics adapter.

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2.4 First Start

2.4.1 Project Dialog

New empty Project
This creates a new project and puts in a simple default surface as the ground plane.

New Project with Stage
This creates a new project and makes a default 3D Room. After defining the project name, the next dialog will ask for Room dimensions in WxHxD. This is the fastest option for creating an indoor stage.

Import from ZIP
With the Import function you can simply import a project from a ZIP-File. If you have opened a project you can use the Export to ZIP function to pack a full project into a ZIP file. This can be easily used to exchange projects between other PCs.

Recent Projects
Realizzer will always show the most recently opened and saved projects.

Open a Project
You can open projects by double clicking on a project in the list or just select and click on the "Open Project" Button.

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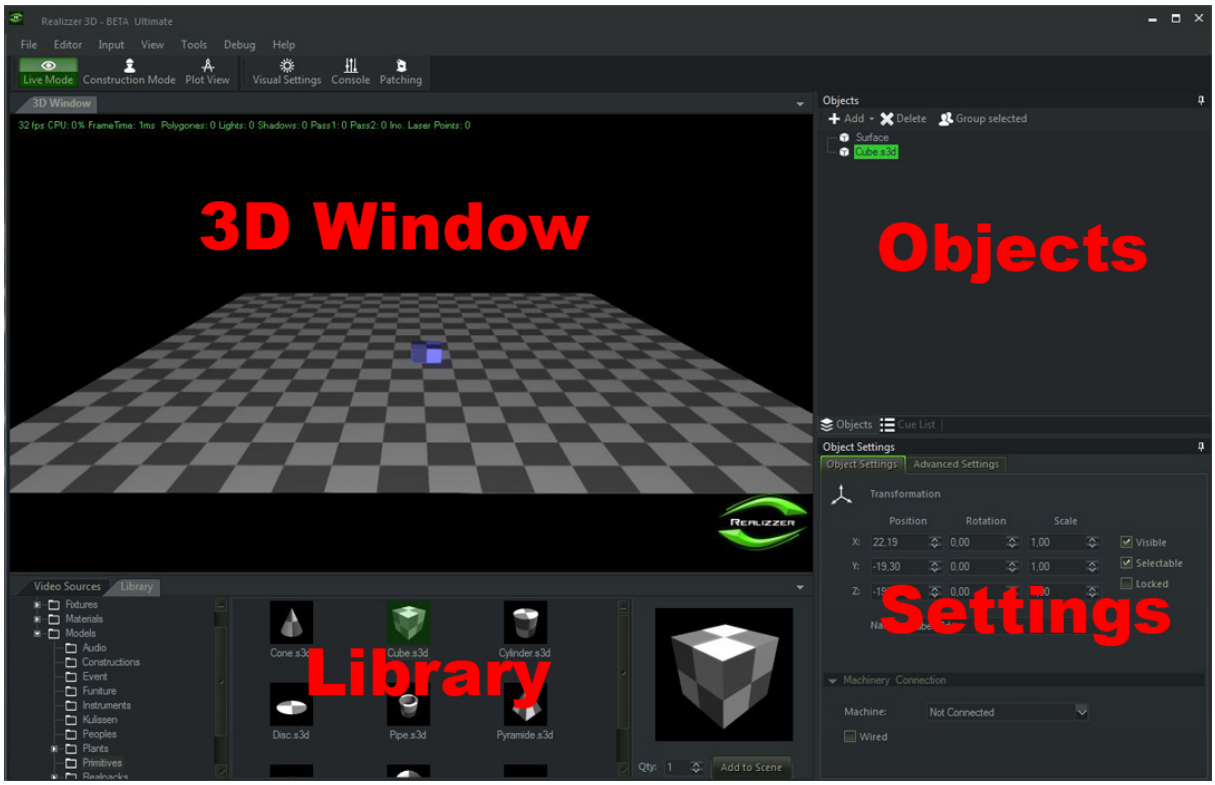
3 Program overview



The User-Interface of Realizzer 3D is split in 4 main areas. All Windows can be drag&dropped onto other windows and can be also released to other screens.

3D Window:
This window has 3 Modes: Live-, Contruction- and Plot View. Depending on the selected mode you can just view, edit or print your 3D Scene.

Objects Window:
This window contains all scene and fixture elements in a tree structure, called Scene Graph.

Settings Window:
Depending on the current selected Objects you can change here all properties of the objects, like position, rotation, intensity, color, etc.

Library Window:
This window contains all library files currently installed in your MyLibrary path.

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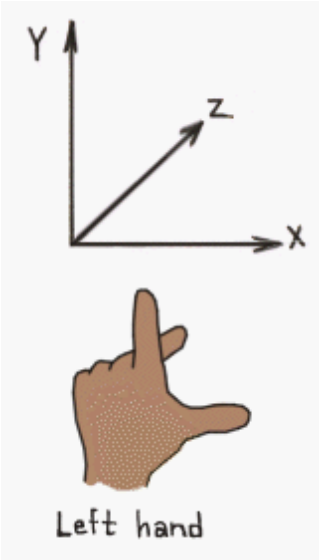
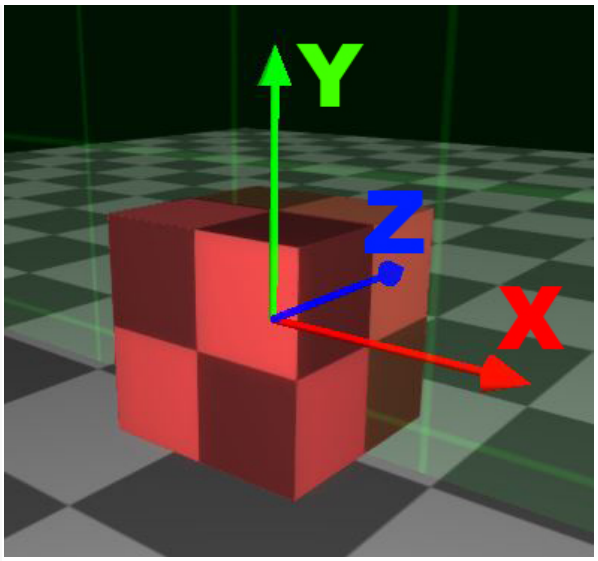
3.1 Coordinate System

Realizzer 3D uses a left handed coordinate System.

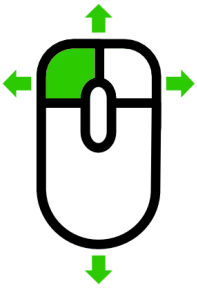




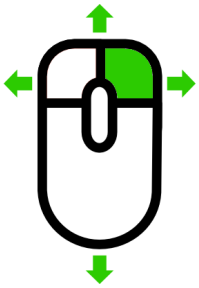
All Measures are defined in Centimeters. Check the Application Settings to change the Measure units.

3.2 Camera Movement

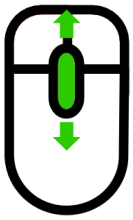
Realizzer uses an Orbit-Camera which is always "orbiting" (rotating) around the selected object.



Use the left mouse button to rotate the Camera around Y and X Axis.



Use the right mouse button to move the camera position in view space.



Use the mouse wheel to Zoom in & out from current view position.

By holding the CTRL- or Shift-Key on your Keyboard you can change the move speed to slow or fast.

3.2.1 Save Camera

Realizzer gives you the possibility to save a current Camera-View to one of your Keyboard F-Keys. Simply move the Camera to the desired Position, HOLD the CTRL-Key and click on one of your F-Key f.e. F2 on your Keyboard. Now the position is saved to this Key. If you later click again on F2 the Camera will moves you back to this position.

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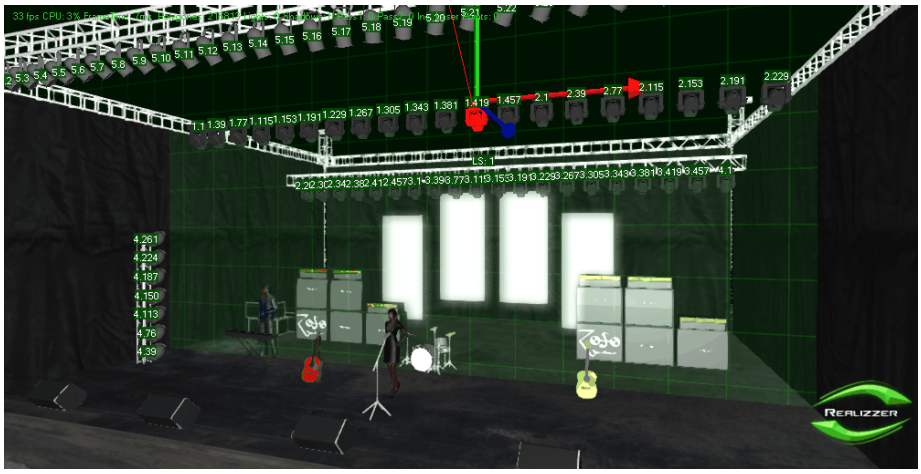
3.3 3D Window



The 3D window has 3 different Modes, which you can select in the Toolbar: Live-Mode, Contruction-Mode and Plot-View.

Live-Mode

This mode is for real time show programing for when you have completed your patching and 3D installation. In this mode you cannot move any 3D Object. You can only select Fixtures.

Construction-Mode

In this mode you can edit your full scene in 3D by using your mouse. Here you can also place Models, Fixtures or Materials via Drag&Drop from your library window.

Plot-View

This mode allows you to Print a wireframe or sketch drawing of your 3D Scene including Fixture information such as Patch ID or DMX Address.

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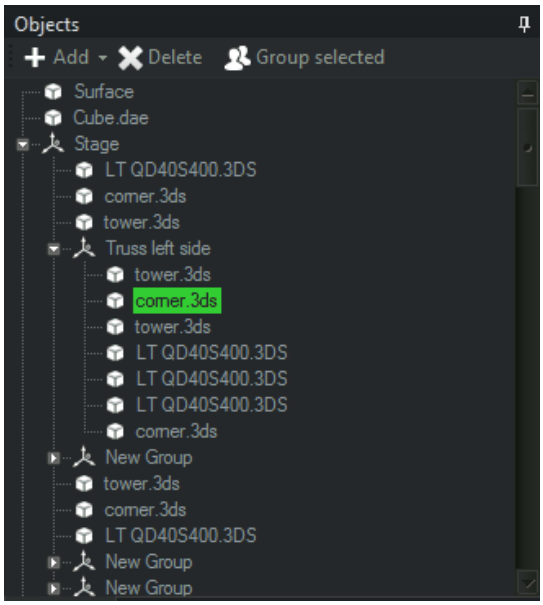
3.4 Objects & Scene Graph Window



The Objects-Window contains all Objects like Fixtures, 3D-Models and Groups of your Project. All objects can be structured in a Tree called Scene Graph.

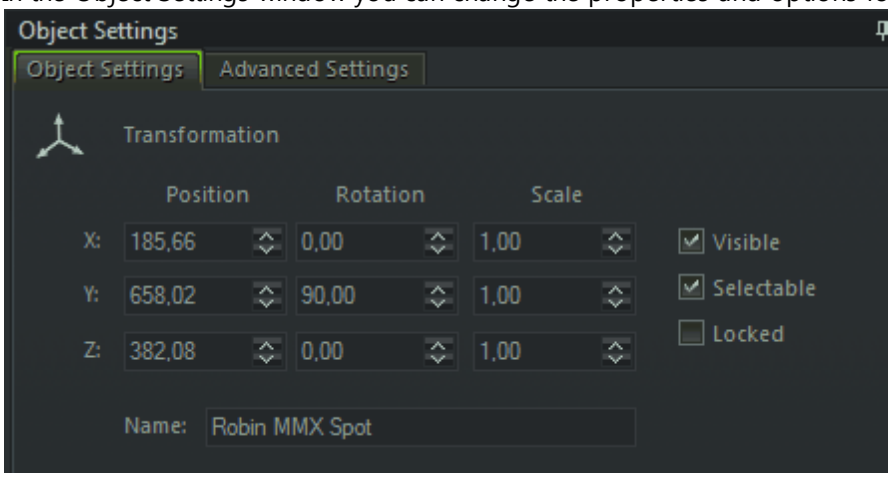
Scene Graph

That means that an object's position, rotation and scale is depending on its parent objects. F.e. if you put a Group-Object on X = 20m and all child's of this group on X = 10m the resulting World-Position of the child's are 30m.

To change the objects hirachy simply drag and drop the selected objects to the new parent object.

3.5 Object Settings

In the Object Settings window you can change the properties and options for the selected objects.



In the Transformation Section you can change Position, Rotation and Objects Scale.
Visible - Object will be rendered in 3D
Selectable - Object can be selected in 3D
Locked - Object cannot be changed in 3D
Name - Change the Objects name

The Advanced Settings Window allows you to change extended properties of each object. This is for advanced users only.

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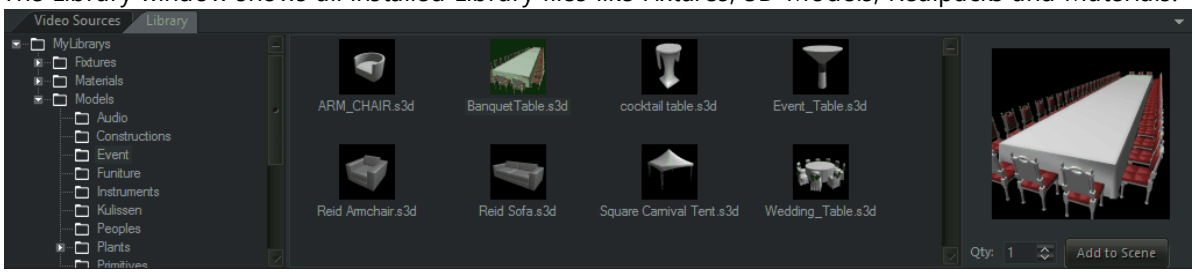
3.6 Library Window

The Library window shows all installed Library files like Fixtures, 3D-Models, Realpacks and Materials.



Add own files to Library

If you want to add files to the library, navigate to your Library path (Documents\Realizzer\MyLibrarys).

- Fixture files need to be in the "Fixtures" Directory
- Material files need to be in the "Materials" Directory
- Model files and Realpacks need to be in the "Models" Directory

To see the Thumbnail image of a 3D-Model, you need to add a thumbnail file with the same Filename as the model:
f.e. a Thumbnail-Filename for "House.3ds" needs to be "House.jpg". The Image format should be squared and not bigger than 128x128 pixel.
Checkout Supported File Formats for more information.

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3.7 Supported File Formats

Realizzer supports lots of known file formats for 3D-Models and Materials.

Supported 3D-Model Import Formats

3D-Format	File extension	Recommend	Known Limitations
Collada	*.dae	✓	-
3D Studio Max 3DS	*.3ds	✓	• Texture file names are limited to 8-Characters • No normals are saved.
Wavefront Object	*.obj	✓	-
Autocad DXF	*.dxf		• Only 2D • Actually under development
LightWave Model	*.lwo		-
LightWave Scene	*.lws		-
Blender	*.blend		-
Syncronorm 3D File	*.s3d	✓	-
DirectX X-File	*.x	✓	-
Stereolithography	*.stl		-
AC3D	*.ac		-
3D Studio Max ASE	*.ase		-

There are more formats supported but not yet tested.

Supported Image / Texture Formats

Image Format	File extension	Recommend	Notes
JPEG Image	*.jpg, *.jpeg	✓	-
Bitmap 8-bit	*.bmp	✓	-
PNG	*.png	✓	-
DDS	*.dds	✓	Can contain saved LOD stages (Mipmaps)
TGA	*.tga	✓	-

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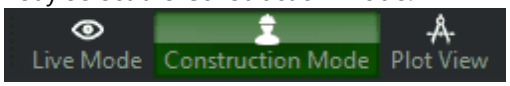
4 Scene Contruction

This Chapter shows you how to build up a 3D Scene.
Fistly select the Construction Mode:



4.1 Import 3D-Models from Library

To import a 3D-Model from the Library window navigate to the Models path in the left side of the Library window. Select the a Model and Drag it onto the 3D Area.

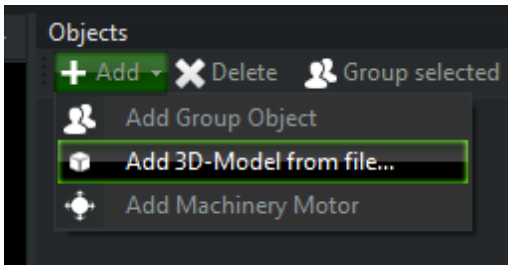
If you want to add more than one object you can also use the "Add to Scene" button and adjust the Quantity with the Editbox "Qty". All models will be placed onto position 0,0,0 and will be arranged on line to X+.

Auto-Group function

If you hold the CTRL-Key and drag the new 3D-Model over an another 3D Model in the 3D-Scene the new Object will be placed as a child object.

4.2 Import 3D-Model from external File

If you want to import a 3D-File from your disk go to the Objects Window, click on Add > "Add 3D-Model from file..."



Please note that the imported files will be always copied to your projects content path. Check out Projects and Library for details.

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4.3 Move, Rotate and Scale Objects

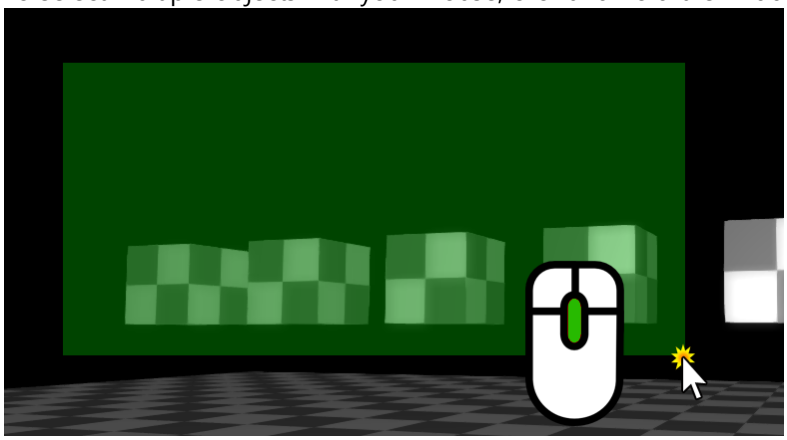
The Realizzer 3D Editor offers you a comfortable way to move, rotate and scale objects directly in 3D with your mouse. Please note: if an object is marked as Locked it cannot be changed in 3D. You can also Move, Rotate and Scale objects using the Transformation in the Objects Settings window.

4.3.1 Selection

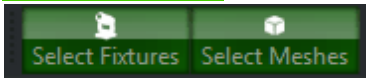
In the Realizzer 3D-Editor you can select objects directly in 3D with your mouse. Therefore simply click in the 3D-View with the left mouse button. For Fixtures and 3D-Models you can decide which ones are selectable by the mouse. Hold CTRL- or Shift-Key for selecting or deselecting multiple objects.

Multiselection

To select multiple objects with your mouse, click and hold the Middle-Mouse button and move.



Selection Modes



If "Select Fixtures" is active you can only select Fixtures.
If "Select Meshes" is active you can only select 3D Models
If both are selected you can select all.

Selection Order

All Objects will be added to the Selection List in same order as you have selected them. If you are using the rectangular Multiselection, the selection will be sorted from left to right in the current View. The Selection Order is important if you are doing Autopatch or Arrange objects.

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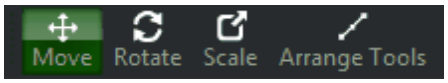
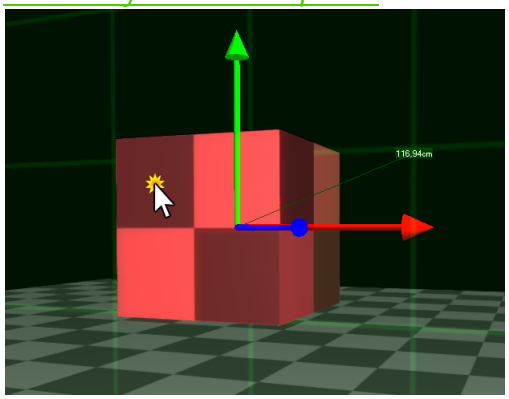
4.3.2 Move Objects

At first select the Move-Mouse mode by clicking on the Toolbar button "Move"



For moving an object you have three possibilities.

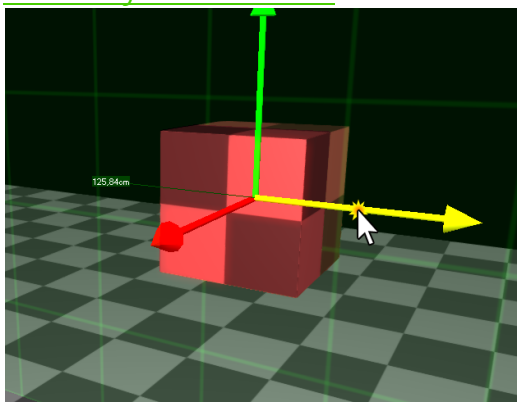
Move Object on view plane



If you select an Object in Move-Mode a green 1m Raster will always be visible and change if you rotate the camera. This is the actual XYZ Axis between Object- and Cameraposition. If you pick a 3D-Model directly it will move on this Raster. You can also see the current distance from the last position.

The Raster can also help to see if objects are parallel to each other.

Move Object with Pivots



By clicking with the left mouse button on one of the Arrows of the visible Pivot you can move the selected Objects only on the clicked Axis. This is independent from the View-Raster.

Each Axis is defined by a color.
Red = X-Axis, Green = Y-Axis, Blue = Z-Axis

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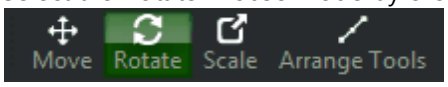
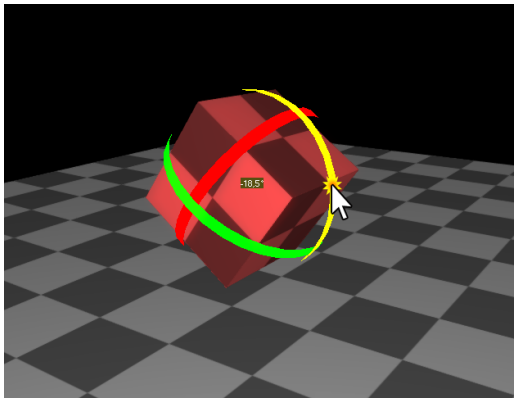
4.3.3 Rotate Objects

Select the Rotate-Mouse mode by clicking on the Toolbar button "Rotate"



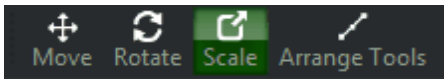


In the Rotate-Mode you will see three round Gimbals instead of Arrows. To rotate, simply click with the left mouse button on one of the Gimbals and move the mouse. You will see the actual offset angle in the middle of the object.

Each Axis is defined by a color.
Red = X-Axis, Green = Y-Axis, Blue = Z-Axis.

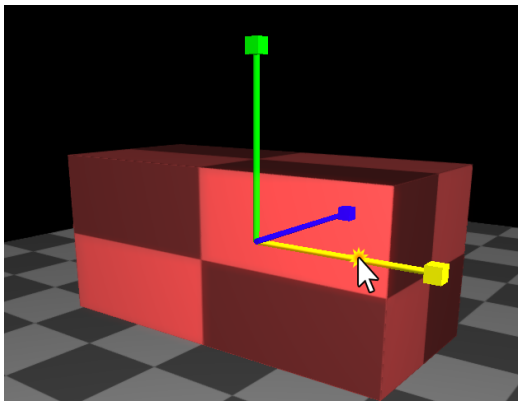
4.3.4 Scale Objects

At first select the Scale-Mouse mode by clicking on the Toolbar button "Scale"



The Scale tool will change the size of the selected object by a given factor while only one object is selected.

Single Selection



By clicking on one of the Pivots with the left mouse button and moving you can adjust the size of the object on selected axis.

Each Axis is defined by a color.
Red = X-Axis, Green = Y-Axis, Blue = Z-Axis.

Multi Selection

If you have selected more than one Object, the tool will change the position relative to the selection center for all objects. The size of each object itself will be not changed.

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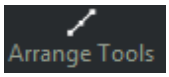
4.4 Arrange Objects

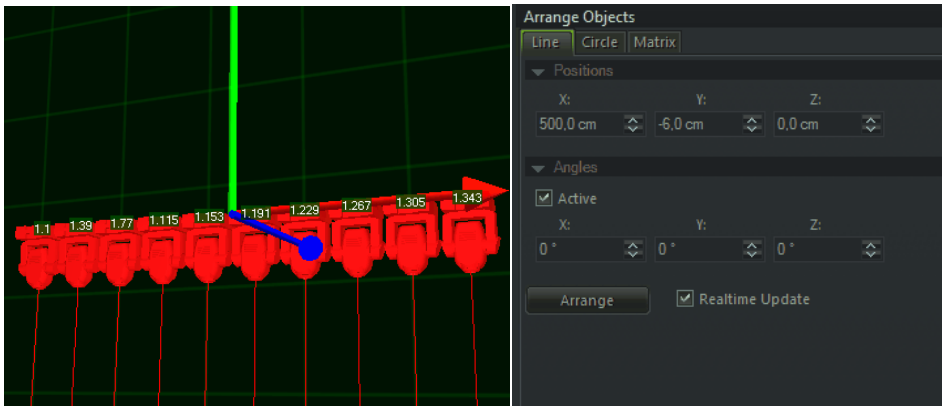
Realizzer comes with an inbuilt Arranger tool, which helps you to arrange objects by Line, Circle or in a Matrix. At first select the objects you want to arrange, then click on the Toolbar Button "Arrange Tools".



A new window will appear beside the Object Settings.

Important node:
All Objects will be arranged in selection order. See Selection for more Information.

4.4.1 Line Arrange



Positions:
The position section defines the distance between each object on the line. You can define a distance for each Axis separately, this will produce angular lines.

Angles:
With active Angles, you can add a relative rotation offset to each Object. This feature will add (Deg / Count) * N degree to each object.

Arrange:
Click this button to arrange.

Realtime Update:
If this option is active, the arrangement will be done immediately after changing any value.

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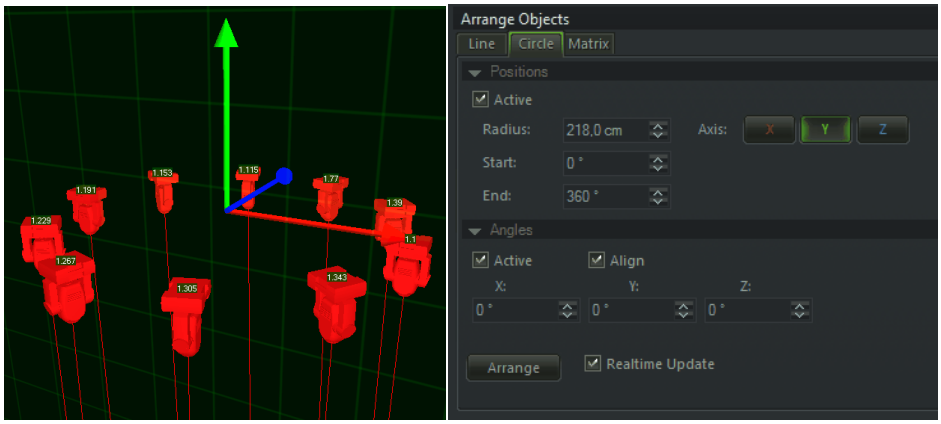
4.4.2 Circle Arrange



Positions:
Radius: Defines the circle radius for arrangement
Start: The Angle on circle where the first object should start
End: The Angle on circle where the last object should end
Axis: Defines the Axis of Circle

Angles:
Active: If the Angles are Active an given angle will be set to the object rotation.
Align: This option will rotate all fixtures according to the circle angle.

Arrange:
Click this button to arrange.

Realtime Update:
If this option is active, the arrangement will be done immediately after changing any value.

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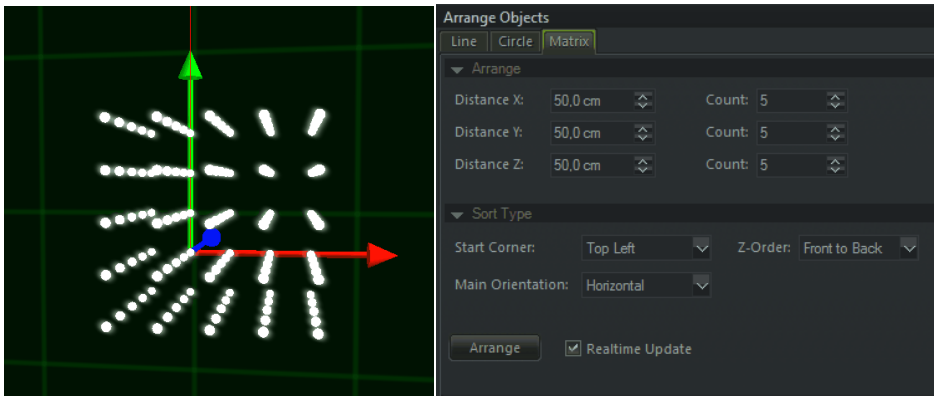
4.4.3 Matrix Arrange



The Matrix Arrange tool allows you to arrange objects on a 2D or 3D Matrix. For 2D simply set the Count on Z to 0.

Arrange

Distance:	Defines the distance between each object per Axis
Count:	Defines the amount of objects on this Axis

Sort Type:

Start Corner:	Defines the Start of order the objects
Main Orientation:	Defines the full Matrix Orientation
Z-Order:	Defines the order of objects in Z-Axis

Arrange:
Click this button to arrange.

Realtime Update:
If this option is active, the arrangement will be done immediately after changing any value.

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4.5 Duplicate Objects

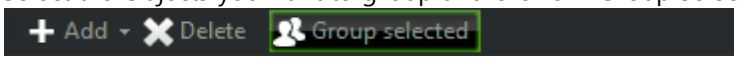
To make copies of selected objects, make a right click on the selection in 3D- or Objects window and click on "Duplicate". In the next Dialog you can define how many of copies you want. You can also duplicate your Objects while holding CTRL-Key and move using the Pivot.

4.6 Delete Objects

To delete objects, right-click on the selection in 3D- or Objects window and click on "Delete"

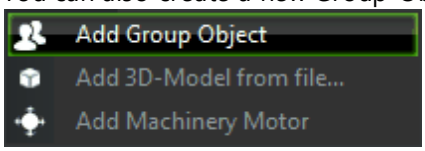
4.7 Group Objects

In the Objects-Window you can put all selected objects under one new Group-Object with one click. Select the Objects you want to group and click on "Group selected"



Realizzer will create a Group-Objects and puts all selected objects as child under the new Group. The position of the new Group will be the Center of all selected Objects. Also the the new position of all selected objects will be changed relative to the new Group-Object.

You can also create a new Group-Object by clicking on Add > "Add Group Object"



4.8 Materials

The Realizzer 3D Editor offers a powerful and easy way to change the Material for each 3D-Model. If you have already loaded a 3D Model which has Textures or Materials on it, the new Material will override the existing material.

Drag & Drop from Library

In the Library window you will find a Folder called "Materials". This folder contains a lot of different Texture images which you can simply drag over any 3D-Model in the 3D-Window. After you have put the material on the 3D-Model a new "Material Settings" Window will appear next to the Object Settings window. From here you can change the details of the material.

Add Empty Material

If you just want a colored Material or if you want to select a Texture from an external source, you can create the Material manually. Select the 3D-Model you want to apply the material to, right-click and click on "Add empty Material".

Remove Material

To remove a Material you have added to a 3D-Model simply select the 3D-Model, right click and click on "Remove Material".

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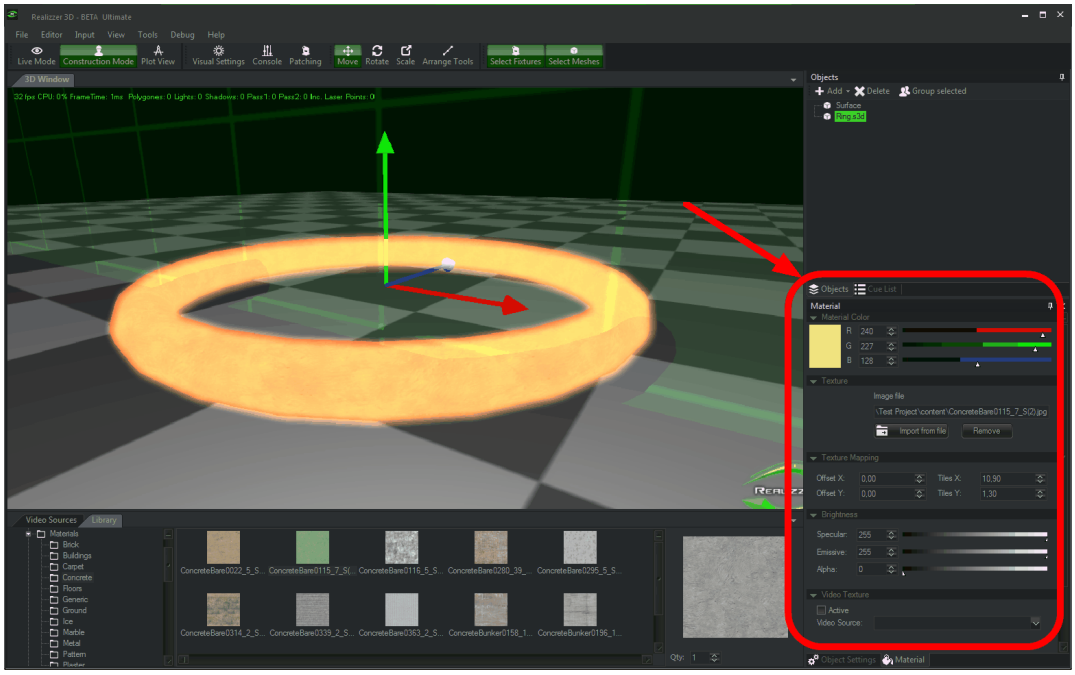
4.8.1 Material Settings



A Material contains various settings to change the look of the 3D-Model.

Material Color
This will change the Diffuse Color of the Material. Use the RGB Sliders to adjust the color. By clicking on the color panel an additional Color-Dialog will come up.

Texture:
The Texture defines the Image that will be shown on the 3D-Object. If you have inserted a Texture from the library the File path will be filled automatically. By clicking on "Import from file" you can select another image from any other source. (Note that all files will be copied to your projects content path). The Button "Remove", will clear the texture of the Material.

Texture Mapping:
The Texture Mapping defines how the texture will scaled on the 3D-Model. Offset-X and Offset-Y will move the full texture horizontally or vertically. Tiles-X and Tiles-Y will adjust the size of texture.

Brightness:

Specular:	Produces a shiny/glossy finish on the 3D-Model
Emissive:	Emissive means that the Object will be emit light itself and will glow
Alpha:	Changes the transparency of the 3D-Object

Video Texture:
This displays the Live-Input from any Video-Source into the Texture. Select the "Active" Checkbox and select a Video-Source. See Video-Sources for more Information.

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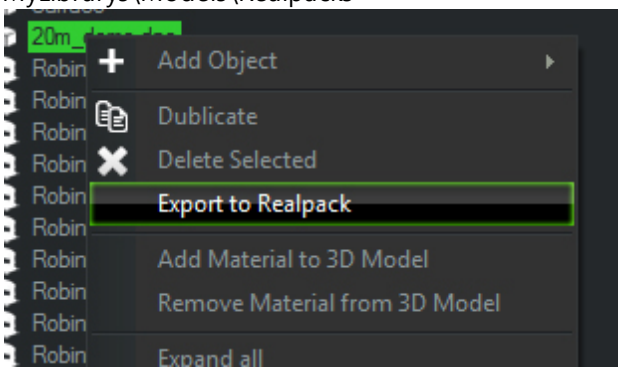
4.9 Realpacks

A Realpack is a specially designed File-Type for Realizzer. It can contain one or multiple objects including all necessary resource files like Models and Textures. For example, with this function you export a whole Stage including all Fixtures, Materials and Models in one File and reuse it in other projects. It is also perfect for making default fixture groups that you use all the time f.e. 10 MovingHeads on a 8m truss.

Export a Realpack

1. Move the Camera of the 3D-Window into a position where you can see the objects in the middle.
2. Go to the Objects Window, Group all Objects you want to export in one Group-Object
3. Right click on the new Group-Object and select "Export to Realpack..." and save the File into MyLibrarys\Models\Realpacks



4. Realizzer will now ask you if you wish to save the actual Camera View as a Thumbnail.

Import a Realpack

If you have saved the Realpack into the MyLibrary Path you can simply drag&drop it to the Scene as with normal 3D-Models.

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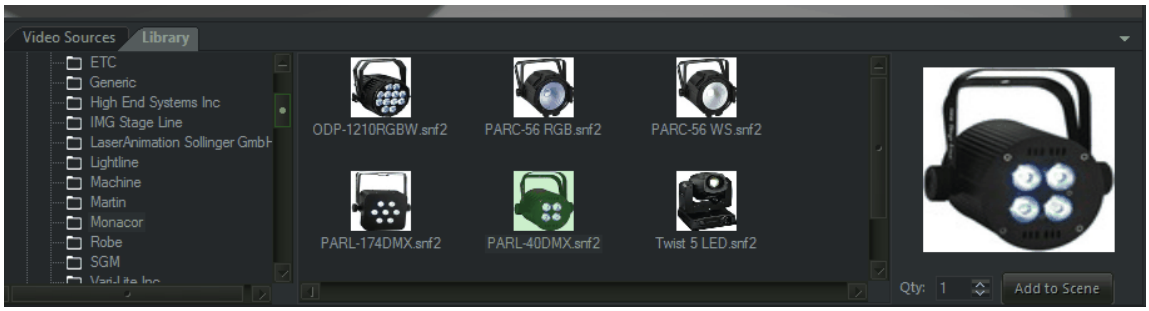
5 DMX-Fixtures

Realizzer can simulate three different Types of Stage devices: Lighting, Machinery and Lasers. Each of these devices (later called Fixtures) will be defined by Fixture-Profile-Files (snf2 file). A Fixture-Profile contains all necessary information like DMX-Protocol, Dimensions, 3D-Model, photometric data, Thumbnail Images, Gobo-, Color-, Effect Wheels and much more. Realizzer comes with a Library of standard fixtures.

If you cannot find your fixture in the library, you can build up your own Fixture-Profile using the easy to use Fixture-Builder that is a part of Realizzer. Please refer to the Fixture Builder section of the Manual for more information.

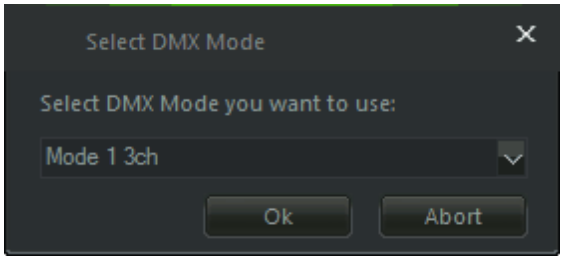
Make sure you have read the Section Scene Construction before continuing.

5.1 Add Fixtures



In the Library-Window you will find the path called "Fixtures". Here you find all fixtures sorted by Manufacturer name. As with 3D-Models you can drag&drop the fixtures to the 3D-Window or using the "Add to Scene" Button.

If the Fixture has more than one DMX-Mode a separate Dialog will display and ask you to select the current Mode.



You can also change the DMX-Mode later in Object-Settings.

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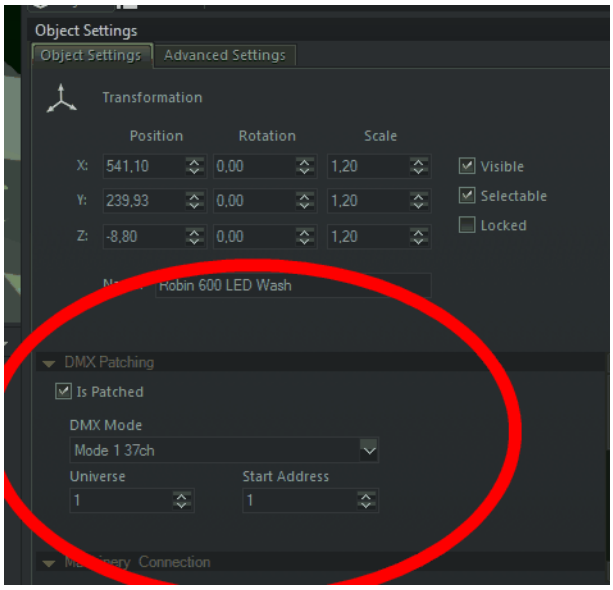
5.2 DMX Patching

As in the same as real installations you need to give each fixture a DMX-Start address to get them work. Realizzer has two methods for patching.

Manual Patch

Select the Fixture(s) you want to give a specific DMX Address. Go to the Object-Settings Window. In the drop-down window called "DMX-Patching" you will find all controls to setup the actual DMX-Address and also change the actual DMX-Mode.



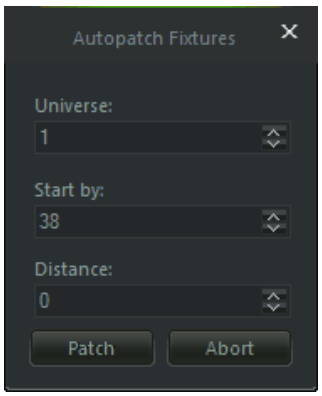
Is Patched
This checkbox is like removing an DMX-Cable from the Fixture. It will keeps the Address but will not work with incomming DMX data.

DMX-Mode
This will change the actual DMX-Protocol, if more than one are available for this Fixture.

Universe & Start Address
Change the actual DMX-Start Address.

Auto Patch

With this function you can patch Fixtures in a sequence. It will automatically check how many channels are taken by each fixture in current mode and will put them sequentially. Select the Fixtures you want to patch, right-click on them and click on "Auto Patch Fixtures". A new dialog will appear::



Universe:
Selects the Universe where the first Fixture should start.

Start by:
Defines the DMX-Address of the first Fixture.

Distance:
With this value you can define a gap between each fixture. F.e. if you place a distance of 5 you will have 5 empty channels between each fixture.

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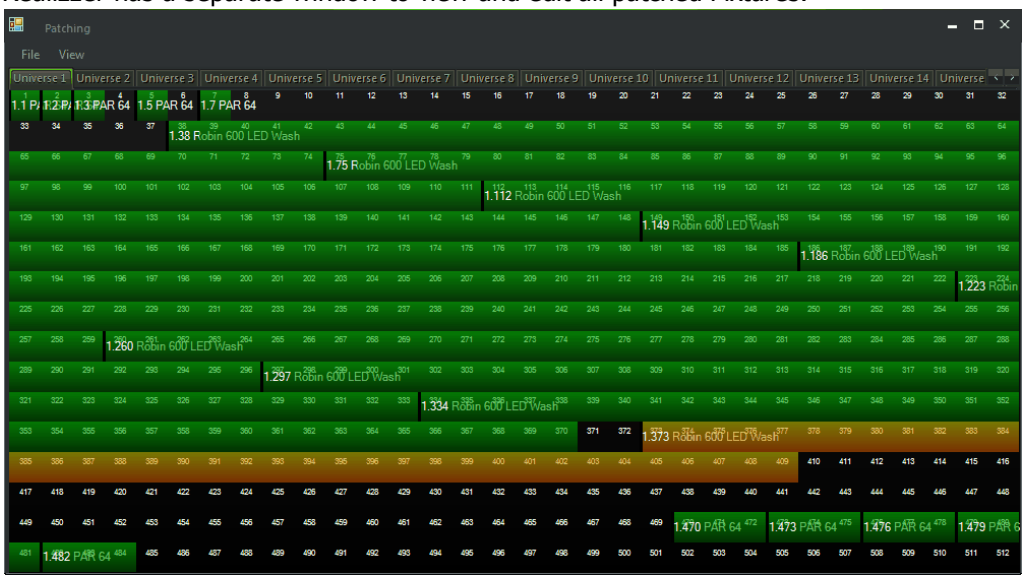
5.2.1 Patching Window

Realizzer has a separate window to view and edit all patched Fixtures.



By selecting and dragging a fixture you can easily change the start address of the fixture. You can also show which fixture is selected in 3D. Go to the Main menu View > "List selected Fixtures only". This can sometimes help if you have an instance of overlapping Fixture addresses.

5.2.1.1 Export Patch

The export allows you to save all Fixture addresses to a CSV File. This file type is supported by most lighting consoles to import/export a Patch so you don't have to do the same work twice.

To export a patch go to the Patch-Window, File>"**Export to CSV...**"

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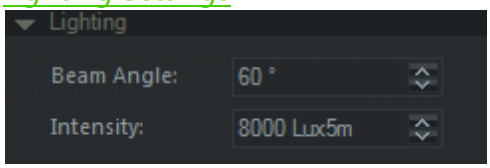
5.3 Lighting Fixture Settings

Each Fixture can have additional Settings which can be also setup in the Object Settings Window when the Fixture(s) are selected. Depending on type of selected Fixture some Features will not be available (Video, Laser, etc.)

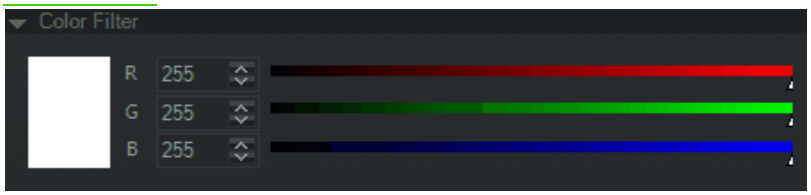
Lighting Settings



Beam Angle:
Changes the current Beam Angle of selected Fixtures.

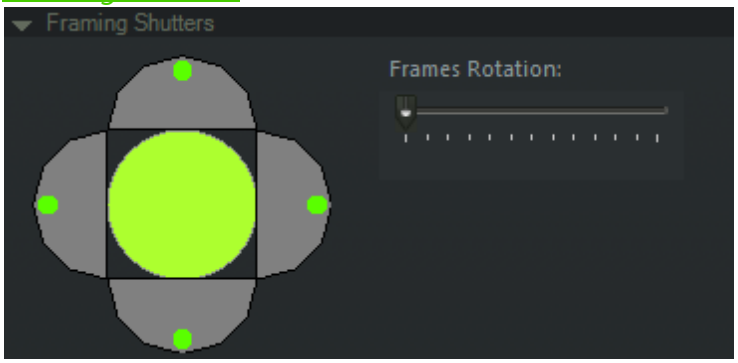
Intensity:
Changes the current light output of selected Fixture.

Color Filter



This will add a Color Filter to the selected Fixtures. This is mostly used for default PAR-cans with Gel-Filters.

Framing Shutters



This will change the manual Shutters on the selected Fixture. You can move and rotate each of the four shutters by clicking on the green dots. Using the Frames Rotation Slider you can rotate all frames together. This is only available for Fixtures which have this feature.

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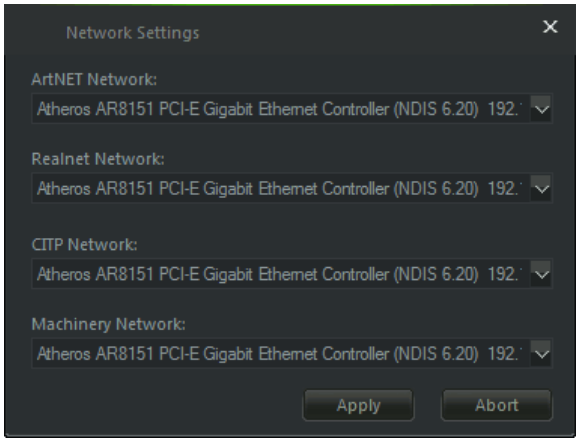
6 DMX Input and Network

Realizzer receives DMX-Data via: ArtNET, RealNet, USB-DMX. To activate a DMX-Input go to the Main-Menu > Input > DMX-Input and select an Input.

Network Settings

It can sometimes be necessary to change the used Ethernet Adapter for a selected Input Protocol. By default Realizzer always takes the first Adapter which is connected to a network. But for example, if you have a Wireless Adapter and a seperate Ethernet-LAN connection specialy for ArtNET you need to define the adapter to be used.

Go to Input > Network Settings...


Network Settings
ArtNET Network:
Atheros AR8151 PCI-E Gigabit Ethernet Controller (NDIS 6.20) 192.
Realnet Network:
Atheros AR8151 PCI-E Gigabit Ethernet Controller (NDIS 6.20) 192.
CITP Network:
Atheros AR8151 PCI-E Gigabit Ethernet Controller (NDIS 6.20) 192.
Machinery Network:
Atheros AR8151 PCI-E Gigabit Ethernet Controller (NDIS 6.20) 192.
Apply
Abort

In this Dialog you can define the Network Adapter to use, for all supported Network protocols.

6.1 ArtNET

Realizzer Supports ArtNET 2.0 DMX Input. To enable the ArtNET Input go to Input > DMX Input > ArtNET and select them. Now other Consoles should be able to find Realizzer using the ArtNET Poll.

Important Notes:

The ArtNET Protocol specifies the beginning of Universes (called Ports) at 0. So on some consoles you have to patch your fixtures in Universe 0 to get the DMX Data in Realizzer on Universe 1. Finally Realizzer's Universes always start at 1.

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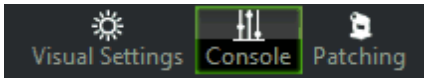
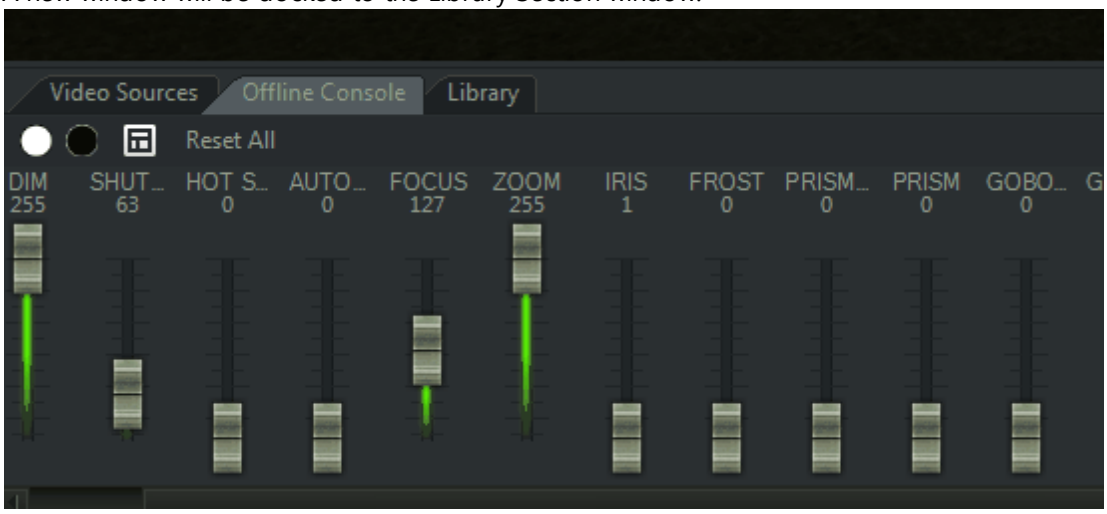
7 Offline Console

Realizzer also comes with an inbuild small offline console. If you just want to make a small design without any connected DMX controller, you can use the offline console fast and easy. To open the Offline Console click on "Console".



A new window will be docked to the Library Section window.



The DMX-Channels of each selected fixture in 3D will be shown in that window and can be controlled manually. The Console will be always utilize HTP (highest takes present), it means if you get f.e. ArtNET Input at the same time, the channel will get the highest DMX Value actually set.

Full Open / Close

In the Toolbar of the Console you can find the Full Open & Close button. The Full-Open Button will automatically find all channels to be set for turning the light on. The Close-Button will shut off the light.

Preset Menu

If a channel contains Presets you can simply set them by clicking on the fader with the right mouse button and select one of the presets.

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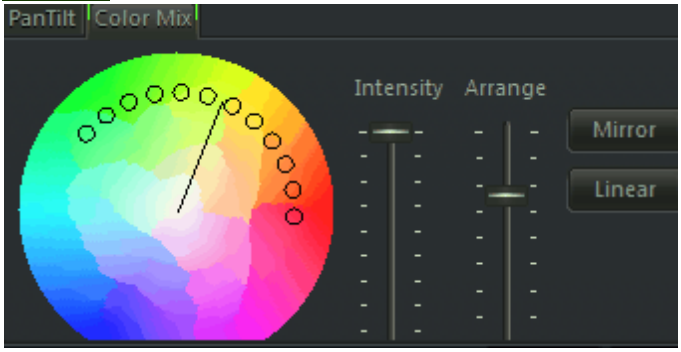
Tools

Click on the button to the right of the Close-Button in the Toolbar of Console:
Now the Tool-Section will be docked to the left side of the Console-Window. It contains tools such as PanTilt and Color-Mix, which help you to change the Pan/Tilt or Color of a Fixture.

PanTilt

By clicking with the left mouse button in the PanTilt picker you can move the current PanTilt position for all selected fixtures. By using the two Fanning faders you can adjust the spread between each Fixture for the specific axis. To move all fixtures relative select the "Relative" Button. The "Center" Button will set all back to the middle.

Color Mix



By clicking with the left mouse button onto the ColorPicker you will change the RGB or CMY color of selected Fixtures. The Intensity-Fader will reduce the intensity for the current color. By using the Arranger-Fader you can arrange all fixtures on the Color-Circle. This produces very nice color gradient effects. Using the additional Arrange Modes Mirror & Linear you can change the behavior of the Arranger tool.

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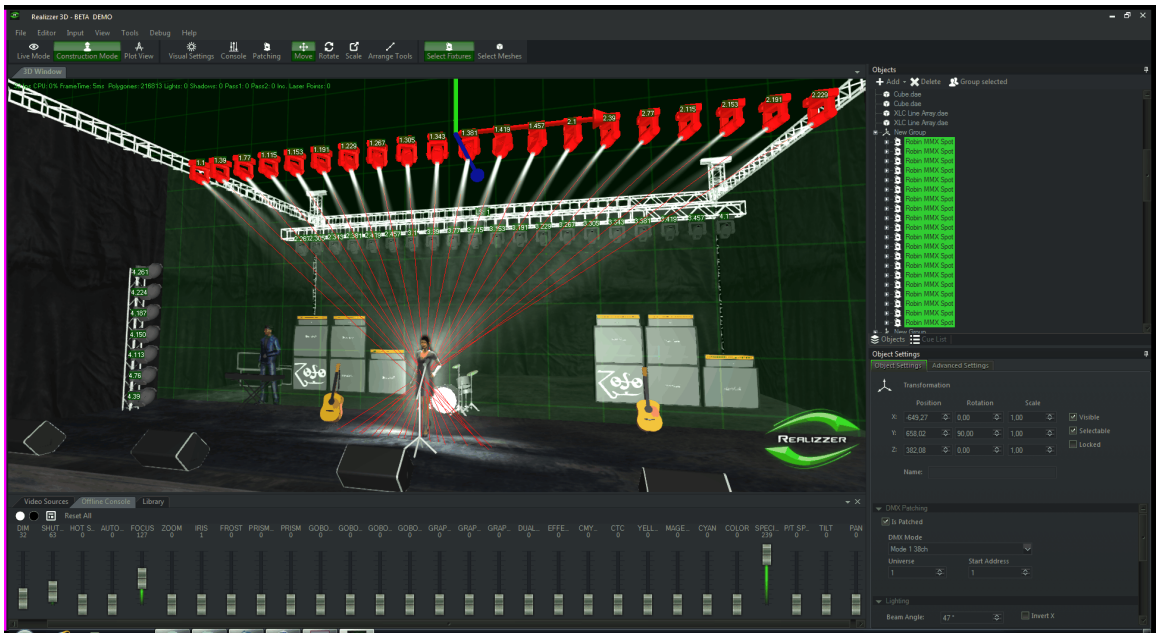
7.1 PanTilt Mouse Tracking



Realizzer offers a simple way to focus all moveable Spots like Moving-Heads and Scanners to a specific 3D-Position. Also, fixed Spots like PAR and Followspots are able to focus on a specific position. This can really help whilst placing your lights.

1. Select all Fixtures you want to focus
2. Hold the ALT-Key on your Keyboard and click on your desired target position with the left mouse button onto the 3D-Window. Now all Fixtures will try to follow this target.
3. By still holding the ALT-Key and using the middle mouse wheel you can change the height of the follow target.

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8 Laser Projectors

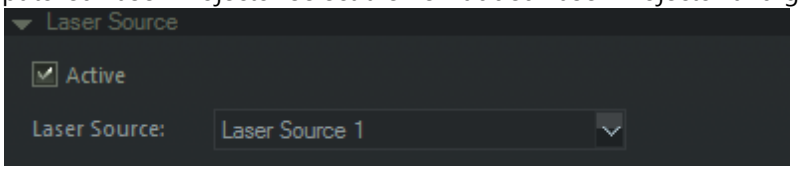
With Realizzer you can simulate all kinds of ILDA controlled Laser-Projectors via a Live-Signal from a supported Laser-Controller. Realizzer supports Laseranimation Sollinger GmbH and Pangolin Beyond controllers. Realizzer will automatically detect an incoming signal from Laser controller and route it to the specific Laser-Source.

Add a Laser-Projector

1. Select the Construction-Mode
2. Open the Library to insert a Laser-Projector Fixture and add them same way as you would for a 3D-Model or Lighting Fixture.

Laser-Source

The Laser-Outputs are assigned by Laser-Sources which is a number from 1-255. You can select the current Laser-Output index also in the Laser Controller. To setup the current Laser-Source for your patched Laser-Projector select the new added Laser-Projector and go to the Object Settings Window:



The "Active" checkbox will deactivate the Laser-Output of the current Projector. Select the Laser Source using the "Laser Source" Combobox.

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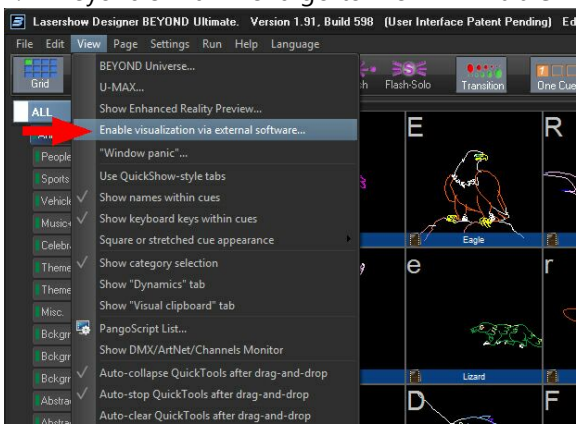
8.1 Setup Laser-Output from Pangolin Beyond

For the communication between Realizzer and Pangolin Beyond an Ethernet/Multicast Protocol is used. The advantage of this is that multiple receivers are possible and can also be on the same PC at the same time. Make sure your using a Router or Network switch which supports Multicast.

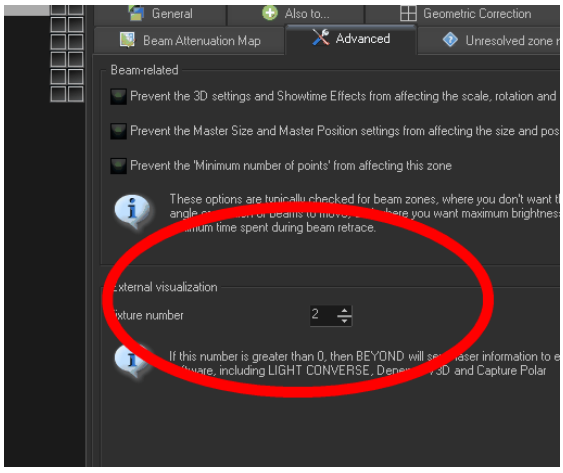
To activate the realtime Laser-Data Output in Pangolin Beyond do following steps:

1. Start Realizzer & Pangolin Beyond
2. In Beyond's Mainmenu go to View > "**Enable visualization via external software...**"



Setup Zone-Settings

In Beyond you can assign to a Projection-Zone to a specific Laser-Output which is equal to the Laser-Source number in Realizzer. Go to "Settings > Projection-Zones". Here you can change all Zone relating properties. In the "Advanced" tab you can set the Laser Source Output Index for Visualization. In Beyond its called "Fixture Number".


General
Also to...
Geometric Correction
Beam Attenuation Map
Advanced
Beam-related
Prevent the 3D settings and Showtime Effects from affecting the scale, rotation and
Prevent the Master Size and Master Position settings from affecting the size and pos
Prevent the 'Minimum number of points' from affecting this zone
2

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8.2 Setup Laser-Output from Lasergraph DSP

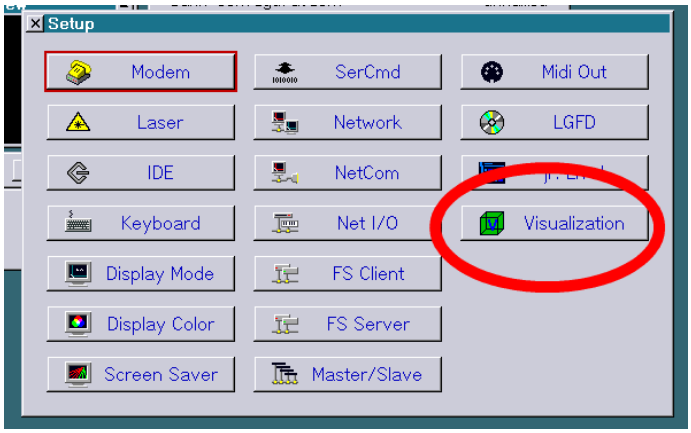
For the communication between Realizzer and the Lasergraph DSP from Laseranimation Sollinger an Ethernet/Multicast Protocol is used. The advantage of this is that multiple receivers are possible and also on same PC at the same time. Make sure your using a Router or Network switch which supports Multicast.

Make sure you are using a Lasergraph DSP which has newest system software (minimum 2014) from Laseranimation Sollinger.

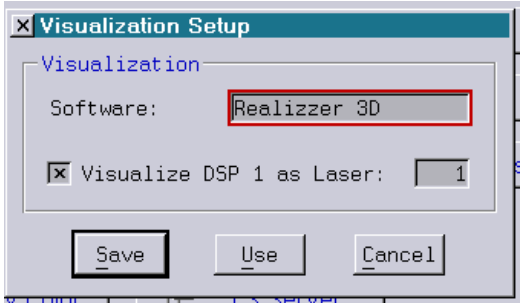
1. Start Realizzer and Boot the DSP.
2. Start the LGRemote Software and connect to your DSP.

Setup DSP for Visualization

3. Type "**setup**" into the Commandline to show the Setup Window.
4. Then click on "Visualization"



5. Select "Realizzer 3D" as Software
6. The checkbox below will activate the Laseroutput.
7. In the Editbox you can set the Laser Source Output Index to which the DSP will send the Data. This compares to the Realizzer Laser Source Number.



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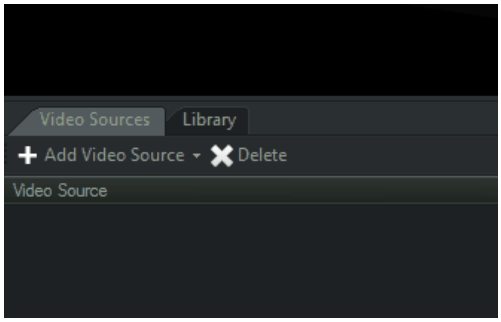
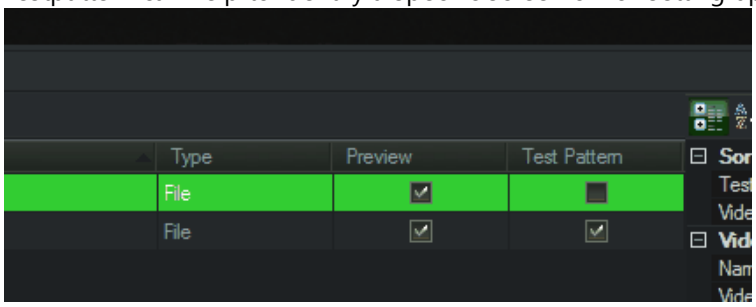
9 Video Sources

In Realizzer you can use Video content on Video-Projectors and Materials. To handle multiple Videos a list of Video-Sources is used. You can find these List in the down window section besides the Library window:



Video Source Settings

For each Video-Source you can enable a Preview in the Main 3D Window and a Testpattern. The Testpattern can help to identify a specific screen or for setting up a Geometric Correction.



In the Settings-Area to the right of the list you can change further properties of each Video-Source:

Name: Will be shown in Testpattern
DMX Universe: Defines the DMX-Universe for DMX-Trigger
DMX Channel: Defines the DMX-Channel for DMX-Trigger
Enable Trigger: Enables the DMX Triggering

DMX-Trigger

If the DMX-Trigger property is on "false" the Video will be played automatically in a loop, otherwise it will wait until the value of given DMX-Channel is >0 and then it will start to play by zero.

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9.1 Using Video-Files

To add a Video-File into the Video Sources click on the Button "Add Video Source" and select "Add Video Source File...".

Supported Video Codecs:

Realizzer uses Windows DirectShow to decode Videos. So it is basically depending on the installed Video-Codecs on your System. Its recommend to install any known Codec-Pack like the KLite-Codec Pack, after this you should be able to load any kind of video or image file.

9.2 Using Live-Capture Devices

Realizzer supports Live-Video data from any installed Capture device like Webcams or DVI capture cards. As with Videofiles click on "Add Video Source" and select "Add Capture Device". Realizzer check for installed devices and list them in a dialog where you can select it.

9.3 Using CITP Video

Coming soon.

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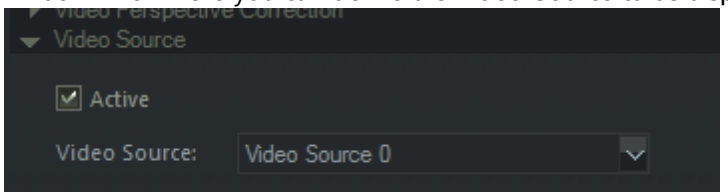
9.4 Video Projectors

Realizzer supports realtime projection of Video-Sources using Video-Projector Fixtures. Open the Library and patch a VideoProjector f.e. in the "_Generic" folder. Depending on the Fixture-Profile a Projector can also have all intelligent lighting features as any other Fixture like Shutter, RGB, CMY, PanTilt, etc. so this means it can also have DMX-Channels. Therefore this will need to be patched like any other fixture.

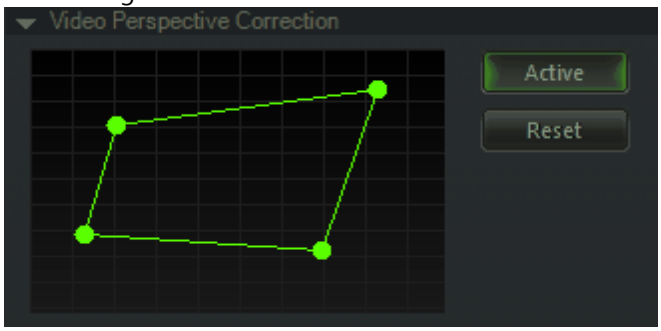
Setting Video-Source

After you have selected the Video-Projector you will find the "Video-Source" panel in the Object-Settings window. From here you can define the Video-Source to be displayed on this projector.



Video Perspective Correction

With this option you can make any kind of "Keystone Correction" if your Projector Position is not exact orthogonal to your projection surface. You can change each Corner by clicking with the left mouse button on the green balls and then move them. After activating the "Active" Button you can see the changes in realtime on the projector. It is recommend to activate the Testpattern on the Video-Source while doing this correction.



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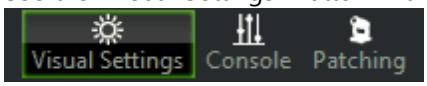
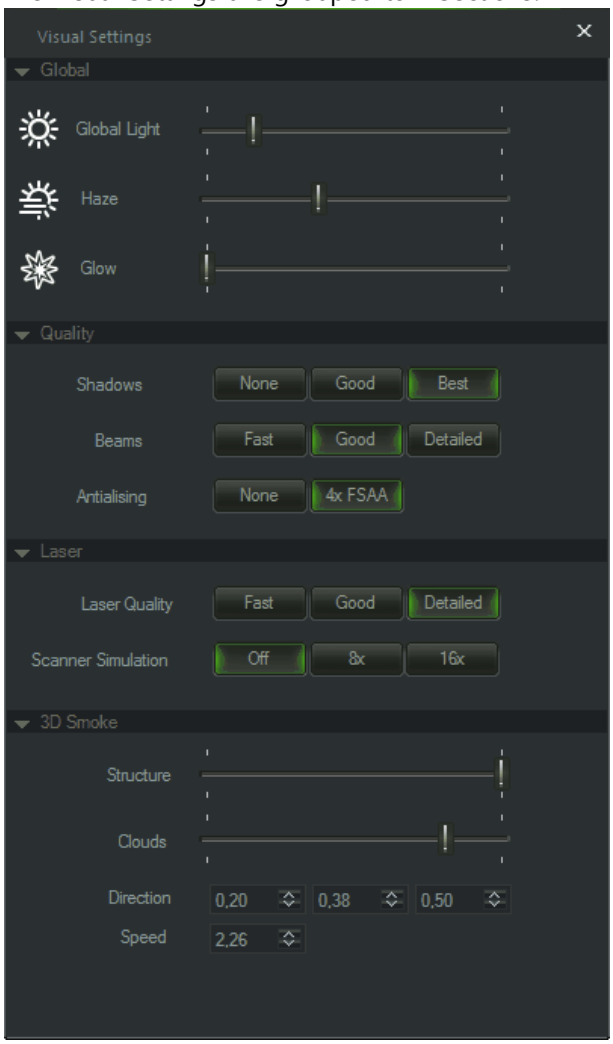
10 Visual Settings

The Visual-Settings Window contains all controls to change the visual properties of the current 3D-View. Use the "Visual Settings" Button in the Main Toolbar.



The Visual Settings are grouped to 4 Sections:



Global

Global Light: Changes the Global Light Intensity
Haze: Changes the intensity for all light beams
Glow: Produces a Bloom/Glow effect for all bright areas

Quality:

This section changes the render-quality for Shadows, Beams and Antialising. If the frame rate quality of Realizzer goes down, try to reduce the quality from here.

Laser:

Realizzer Supports a physical Scanner-Simulation. Depending on selected Sampling Rate 8x or 16x this takes less or more performance.

3D Smoke

Using the Structure and Clouds fader you can adjust the the density of 3D Clouds that are visible for Laser- and Light beams.
Direction: Changes the vector direction of Cloud movement
Speed: Changes the speed of Cloud Movement

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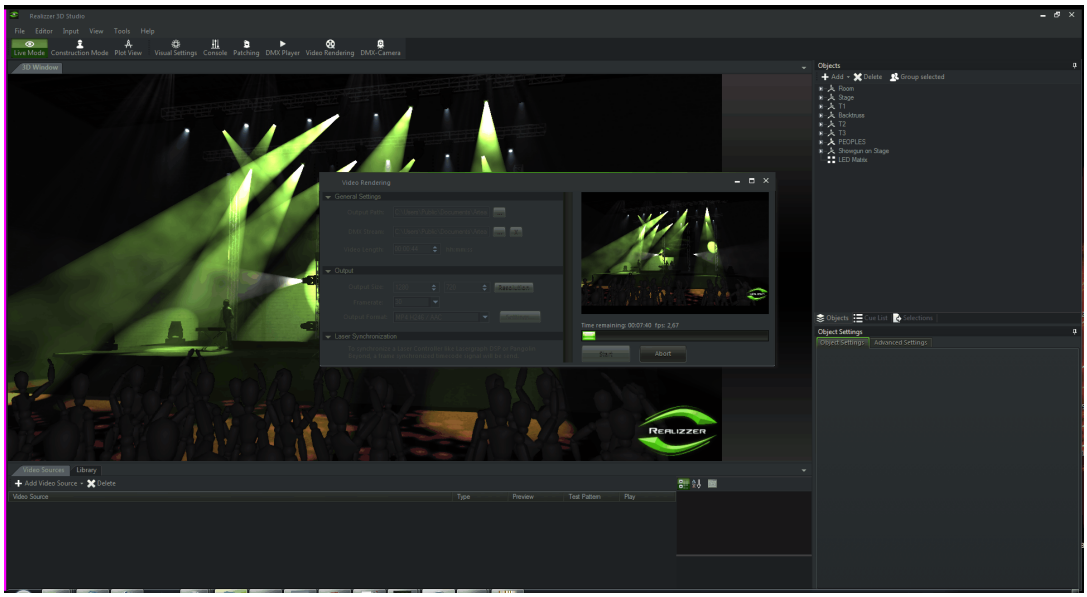
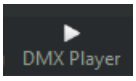
11 Video Rendering

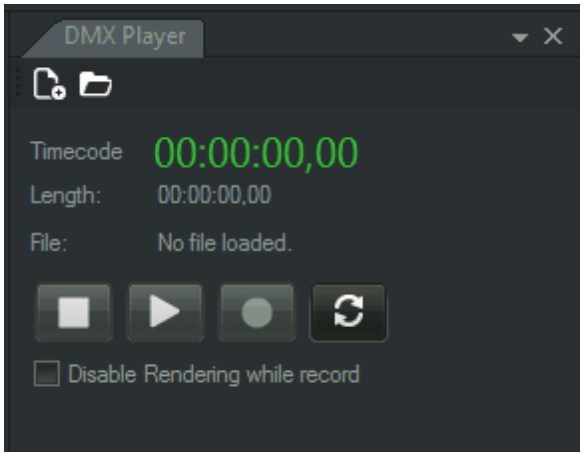
Starting with a Studio-license, Realizzer is also able to render out a high quality video file of your Light- or Lasershow together with audio.
Of course this feature give you the possibility to create very impressive Show-Videos for your clients in HD. Independently of your hardware resources you can render much more lights in highest quality without slow fps.



11.1 DMX-Stream

Video-Rendering isn't possible in Realtime, because of slower hard disks and video encoding, so each frame can be saved by approx 2-5 frames per seconds. This is quite to slow for using an realtime dmx-input signal. For this reason Realizzer comes with a DMX-Recorder/Player tool. This tool records the full DMX-Input signal of all 128 Universes in exact 30 frames/second.

To open the DMX-Player make a click on: 



Record a DMX-Stream

At first make your your DMX-Input is working correctly.
1. Click on the "New" button in the toolbar and give the Stream a filename
2. Click on the Record button
3. Now you can start playing your DMX-Show on your controller
4. As soon as you click on stop, Realizzer will finalize the Stream-File and you can play it.

Info: In big installations it can be helpful to Disable the rendering, using the checkbox "Disable Rendering while record", to make sure enough CPU is available to save right DMX data.

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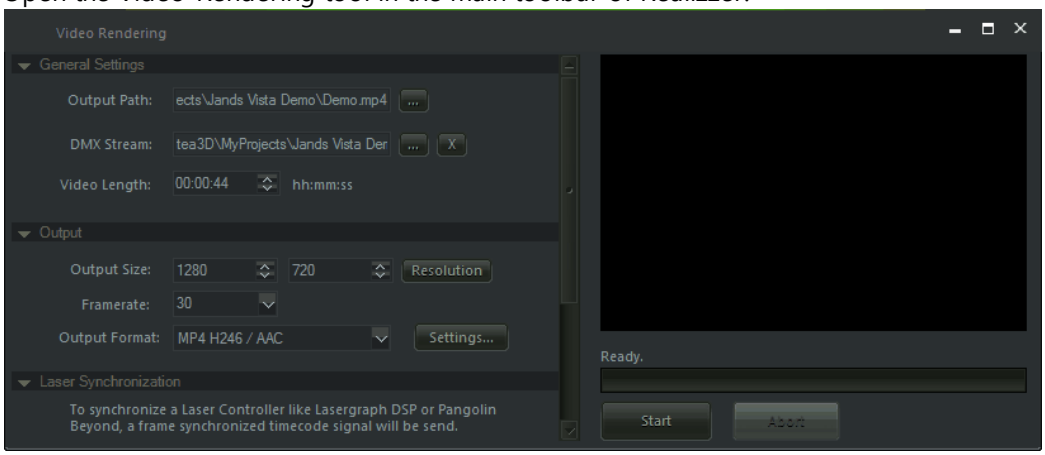
11.2 Render a Video

Open the Video-Rendering tool in the main toolbar of Realizzer.



General Settings:

Output Path:
Here you can define the output file where the video will be saved and also predefine the format.

DMX-Stream:
Here you can input your recorded DMX-Stream file as descripted in DMX-Stream. If you want to render without DMX-Signal leave this field empty.

Video-Length:
This field defines the full length of the Output-Video file. If you load in a DMX-Stream, the length will be automatically set to the duration of the stream.

Output

Output Size:
Defines the Video resolution which should be mostly in 16:9 or 4:3. Other resolutions are possible but can cause problems on several media players.

Framerate:
Defines the Video-Framerate of the Output-Video file.

Output Format:
Same as in Output-Path dialog here you can also decide between JPEG, MP4 H264, WMV or AVI. To change the detailed settings click on "Settings..."

Laser Synchronization

As explained in DMX-Stream the Video-Rendering is not running in realtime, so also the Laser-Signal haves to be synchron with the frames are rendered. For that reason the Lasergraph DSP and Pangolin Beyond supports Ethernet Timecode format NTC and SNTC.

Audio

You can also add any Audio-File to your Video. The Start-Position will define where the Audio will starts to play.

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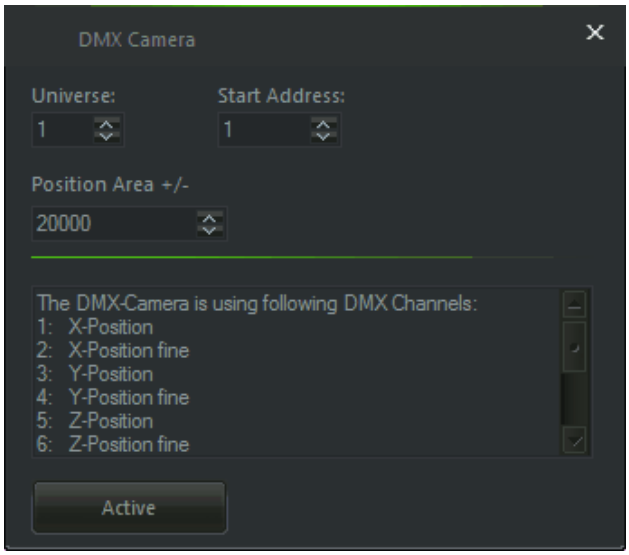
11.3 DMX Camera

To make Camera-Movements in your Animation, Realizzer provides a DMX controllable Camera.



Here you can define the DMX-Address where the Camera should take the DMX-Signals. For each Position- & Rotation axis an 16-Bit value is used. The Position area defines the min/max area where the Camera-Position is working. If you define f.e. 2000cm the Camera will be at 100% DMX on +2000cm and on 0% DMX on -2000cm on the specific axis. The Rotations are working from -180 to 180 degree.

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12 Version Changelog

This chapter gives you an overview of all features and fixes for each new software release.

12.1 1.3.0.0

Realizzer 3D - 1.3.0.0 Build 2014-08-19
- 0000168: [Main Software] Progress Dialog while loading/creating project
- 0000165: [Main Software] Error after closed Material Window
- 0000166: [Main Software] Duplicate while CTRL-Key and move object using pivots
- 0000150: [Main Software] Duplicate doesn't work for multiselected items
- 0000163: [Main Software] Sometimes losing saved global light on switching between editor modes
- 0000161: [Main Software] Reset values if double click on Position, Rotation or Scale Text in Transform
- 0000162: [Main Software] Fast 45° rotation steps button in Transformation
- 0000149: [Main Software] Pan Tilt inversion
- 0000159: [Main Software] Automatically switch to Construction Mode after add an object from library
- 0000158: [Main Software] Draw BoundingBoxes of Selection to make visible hidden objects
- 0000157: [Main Software] Ask for X/Y/Z Offset on Add and Duplicate objects
- 0000156: [Main Software] Studio - Video Rendering using JPEG/MP4 H246/WMV/AVI
- 0000153: [Main Software] LED Matrix - distance limited to 100cm
- 0000144: [Library] Show Fixture Info

12.2 1.2.0.0

Realizzer 3D - 1.2.0.0 Build 2014-05-30
- 0000148: [Main Software] Getting all 128 Universes via ArtNET from Madrix
- 0000147: [Main Software] Strobe will be not disabled when its in a specific preset range
- 0000146: [Main Software] Material Map Editor
- 0000044: [Main Software] Scale factor for Clouds and Structure fog in Visual Settings
- 0000145: [Main Software] Multiselection for Material editing
- 0000143: [Main Software] Save Selections in a List
- 0000142: [Main Software] Out of memory on big projects
- 0000141: [Main Software] Adding Random Offsets for Matrix Arrange tool
- 0000140: [Main Software] Beams are visible through objects if camera is inside the beam

12.3 1.1.0.0

Realizzer 3D - 1.1.0.0 Build 2014-03-14
- 0000127: [Fixture Builder] Manufacturer selectection does not work
- 0000139: [Main Software] Cuelists will be not cleared after load new project
- 0000138: [Main Software] ENTTEC USB-Pro Support
- 0000137: [Main Software] Save QuadView Mode while switching between Live & Constr. Mode
- 0000129: [Fixture Builder] Ask for close
- 0000130: [Library] Some compound fixtures where case is scaled to zero
- 0000131: [Library] Some fixures where DegPerSec is not working for PanTilt
- 0000123: [Main Software] Laser InvertX fails if ScannerSimulation is active
- 0000126: [Main Software] show fixture info for selected fixtures in library
- 0000136: [Main Software] Laser SoftBeams

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- 0000135: [Main Software] New Volumetric Light Beam Rendering
- 0000125: [Main Software] Fixturepatch Abort on Modeselection or Qty does not work
- 0000133: [Main Software] Default Universe for Fixtures is still on 2
- 0000122: [Main Software] Crashes after loading a project
- 0000015: [Main Software] Integration of USBone for DMX In

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